

# Trickle Research

Every raging river, every great lake, every  
deep blue sea starts ... with a trickle



## Initiating Research Coverage



### **Alvopetro Energy Ltd.**

(TSXV:ALV.V; OTC:ALVOF)

<http://alvopetro.com/>

**Report Date: 11/07/18**

**12- 24 month Price Target: USD \$1.10**

**Allocation: 4**

**Closing Stock Price at Initiation (Closing Px: 11/07/18): USD \$.38**

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**Disclosure:** Portions of this report are excerpted from Alvopetro's filings, website(s), presentations or other public collateral. We have attempted to identify those excerpts by *italicizing* them in the text.

## Company Overview

Alvopetro Energy Ltd. (“Alvo”) is engaged in the exploration for and the acquisition, development and production of, hydrocarbons in the Recôncavo basin onshore northeast Brazil. Alvopetro holds interests in three production areas and 11 exploration blocks comprising 73,473 gross acres (63,460 net acres) onshore Brazil. The first two of these fields are referred to as Caburé and Gomo and are the subject of much of the near and intermediate term focus respectively. The third is referred to as their “conventional exploration inventory” and is located north of the other two properties. Caburé and Gomo are largely natural gas plays while the third is a blend of convention oil and natural gas prospects.

Alvopetro’s vision is to become a leading independent oil and natural gas operator in Brazil. Alvopetro’s strategy is to unlock the onshore natural gas potential in the state of Bahia in Brazil, building off the development of our Caburé natural gas field and the construction of strategic midstream infrastructure.

The Company was established in November 28, 2013 as a result of an agreement among Petrominerales Ltd. (“Petrominerales”), Pacific Rubiales Energy Corp. (“Pacific Rubiales”) and Alvopetro Energy Ltd. (formerly 1774501 Alberta Ltd.) whereby the parties agreed to complete an arrangement (the “Arrangement”) under section 193 of the Business Corporations Act (Alberta). Under the Arrangement, Pacific Rubiales acquired Petrominerales, with each Petrominerales shareholder receiving cash consideration of CAD\$11.00 and one common share of Alvopetro for each Petrominerales share held. The Arrangement was completed on November 28, 2013.

The Company’s management has extensive experience developing and monetizing resource programs in Latin America. Alvo’s Chairman of the Board, John D. Wright, was the former President and CEO of Pacalta Resources, an early entrant in Ecuador, growing production from zero to over 40,000 bopd over two years and selling for US\$1.0 billion. Alvo’s President, CEO and Director, Corey Ruttan is the former CEO of Petrominerales, which as the narrative above describes is essentially the predecessor of Alvopetro. Petrominerales was an early investor in Colombia in 2002 and became one of the country’s largest exploration companies prior to its sale to Pacific Rubiales for US\$1.8 billion in November 2013.

Currently, the Company generates nominal revenues (less than \$1 million per year) from participation in a handful of wells. However, the Company has also developed 4 wells and the associated infrastructure in the Caburé unit, which is also located in an area they refer to as the “Unitized Development Area” (“UDA”). To edify, unitization agreements are Brazil’s answer to ensuring resources shared between adjacent land owners is developed fairly and to maximize the recovery of hydrocarbon in place. As we understand it, prior to development, resource “neighbors” must adopt a plan, that describes how they will develop and ultimately share adjacent resources. That plan is often the subject of an arbitration process. In April of 2018, the Company was able to complete the framework of that agreement with their neighbor in the Caburé unit, which set the stage for the Company to begin developing and monetizing that asset. That event marked a milestone for the Company.

In May 2018, the Company finalized a gas sales agreement with Bahiagas, a Brazilian natural gas distributor. That agreement provides a defined market (prices and amounts) for the Company’s gas and includes parameters that the Company views as favorable relative to other potential alternatives. The agreement will require the Company to construct a pipeline and associated infrastructure to allow for the delivery of the gas to one of Bahia’s large distribution centers (referred to as the “city gate”). The completion of this agreement is another milestone for the Company. In September 2018, Alvo announced a contract with Enerflex (TSX:EFX) to construct it’s natural gas treatment facility, the key asset in the remaining development. Enerflex is a world leader in the space, and under the agreement they not only fund the entire plant, they warranty the completion date and the ongoing performance of the facility. This is an independent validation of the opportunity and another significant milestone for Alvo. It derisks the project both operationally and financially. The Company also recently completed a \$4 million equity raise.

We believe the Company has effectively closed the loop on a strategy developed to maximize the monetization of their established resource at Caburé, and we think the project now provides much improved visibility to outcomes that speak to considerably higher valuations for the Company. We also think the Company’s other concessions, some of which could benefit from the Caburé project/infrastructure, may provide additional valuation legs to the story. Moreover, those additional legs have the potential to add *multiples* to the current valuation on their own.

## Project Overview

Trickle Research is a generalist microcap platform, and as such, we cover a variety of industries. However, we submit, some are easier to grasp than others, and we tend to have an affinity for resource deals for several reasons not the least of which is that they are generally easier to understand than many of the other industries we have covered or are considering. With that said, while Alvopectro is an (integrated) oil and gas company, we submit it is a bit more complex than some we have seen, largely because of the pieces they have assembled. We think many investors who have heard the story may share at least some of that view, as we don't think the street in general full grasps the sum of the parts valuation we believe the Company represents. Granted, some of that valuation visibility has improved markedly over just the past few months, so it may simply be that the street is just trying to catch up. However, we don't think the rationalization of the "sum of the parts" is overly intuitive, so perhaps the following Project Overview will provide some valuable color in that regard.

First, as the Management Overview below will suggest, Company leadership has marked experience in oil and gas exploration and development in South America. For historical context, Alvopectro CEO Cory Ruttan was previously the CEO of Petrominerales, which prior to November 2013, was a Latin America-based exploration and production company producing resources in both Colombia and Peru. In November 2013, Petrominerales was acquired by Pacific Rubiales Energy Corp., which today is known as Frontera Energy Corporation (Toronto: FEC.TO). The transaction was consummated for (CAN) \$11 per share, which equated to a total value of approximately (CAN)\$1.5 billion, but also included a share of a NewCo. Focused on Brazil. Mr. Ruttan "went with" that transaction to run the NewCo, which is today Alvopectro. We would note at the time of the transaction Mr. Ruttan noted that *"Over the past eleven years, we have discovered over 100 mmbbls of oil in Colombia, grown production to over 23,000 bopd, returned over C\$150 million to shareholders through dividends, generated over US\$700 million of royalties and tax revenue for Colombia, and established Fundacion Vichituni investing in highly successful voluntary social investment programs creating a lasting benefit to local communities. Since our initial public offering in 2006, at C\$3.75 per Petrominerales share, Petrominerales shareholders have earned a compound annual rate of return of over 20% on their original investment, including dividends and the value of this Arrangement."* We are comfortable suggesting that Alvopectro management has valuable successful experience in Latin American energy operations.

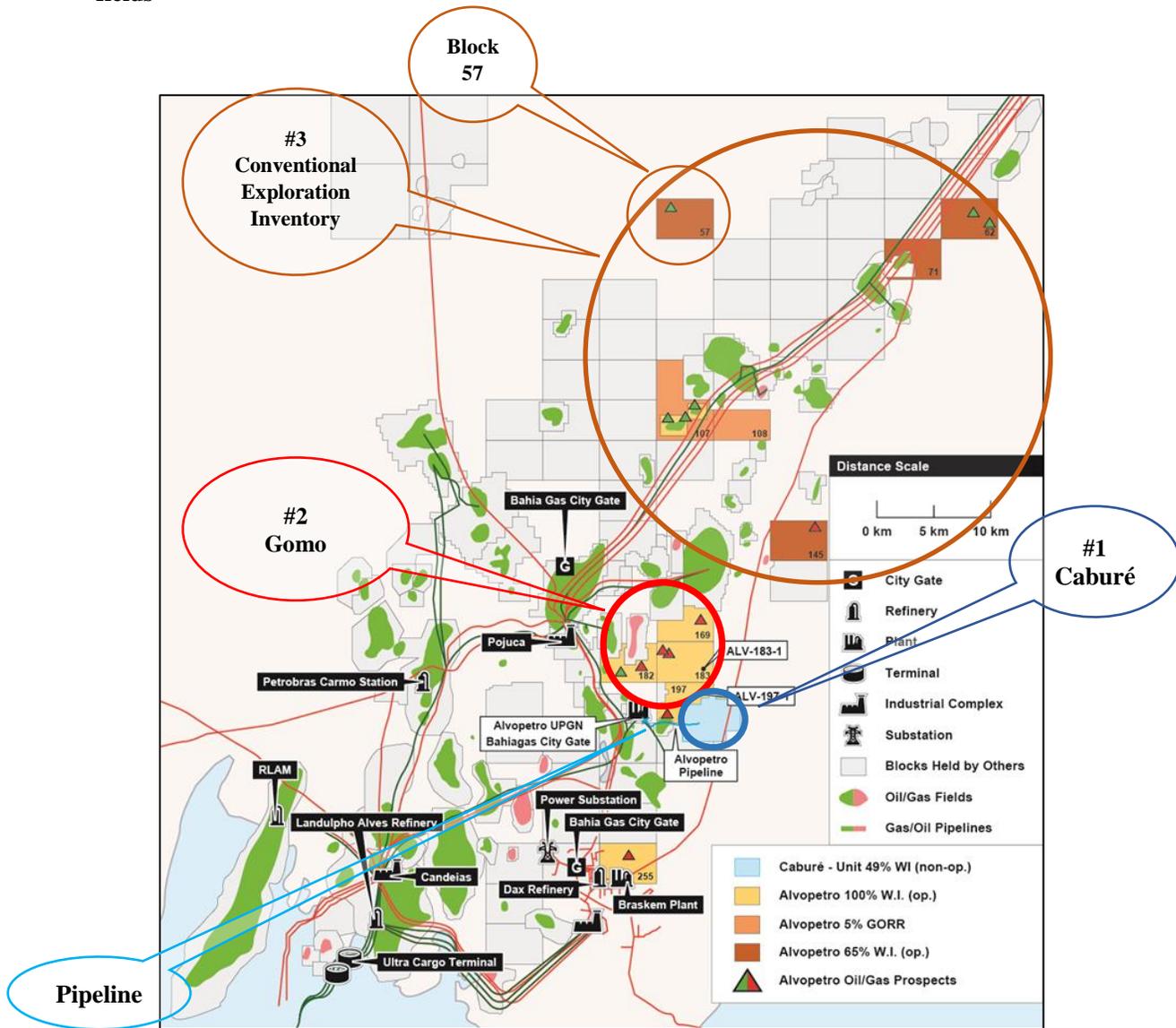
With the above history in mind, recognize, there are basically four Brazil based project components to the Alvopectro story today, and we view those collectively as two near term, one intermediate term and one long term opportunity for the Company. The projects are located in close proximity to one another in what is referred to as the "Recôncavo and Camamu-Almada basins", located along the eastern south Atlantic coastline of Brazil in the state of Bahia:



(www.Mapsland.com)

These projects are as follows:

1. “Caburé” (natural gas) - the near term play
2. “Gomo” (natural gas) – the intermediate term play
3. The “conventional exploration inventory” (likely a conventional oil play) – the long term play
4. Legacy and current production through participation in the Bom Lugar, Jiribatuba and Mãe-da-lua fields



## 1. Caburé

To reiterate, Caburé is the most visible/imminent of the Company’s three projects and is the primary basis of our valuation analysis regarding Alvopetro. We believe that Caburé was the Company’s initial exploration focus in Brazil, however those efforts resulted in the discovery of natural gas where we think they may have expected to find oil. In any case, as it has turned out, Caburé has proven to host a considerable natural gas reservoir. Third party resource estimates peg Alvopetro’s share of that (recoverable) resource at nearly 28 billion cubic feet. Alvopetro’s ability to recover and monetize that asset has been predicated on three necessary endeavors we will discuss below.

- The unitization agreement

We provide some additional color on this issue in the Industry Overview below, but in general, the Company's Caburé unit was/is subject to a process referred to as "unitization". Unitization is a protocol that attempts to proactively resolve potential disputes between owners of mineral blocks/rights that may overlap resource pools/reservoirs. Since a reservoir may be accessible from lands owned by multiple parties, a unitization agreement attempts to allocate the resources drawn from the reservoir according to each owners' respective share of the blocks that encompass the extent of the reservoir. While The unitization agreement at Caburé encompasses 4 existing wells the first of which was drilled in 2014. In short, following a mid-2015 reserve report reflecting a considerable reservoir resource, Alvo Petro set in motion the necessary requirements to frame and complete the applicable unitization agreement with its block neighbor. After considerable time and effort, that agreement was finalized between all commercial and regulatory participants in **April 2018** paving the way for the eventual monetization of the asset. The completion of the unitization agreement was a *major milestone* for the Company.

- The long-term gas sale agreement

Shortly after the completion of the a fore mentioned unitization agreement, Alvo Petro completed a long-term gas sales agreement ("GSA") that will provide them a long term and relatively predictable market for their Caburé gas production. The agreement was signed with Bahiagás, a large Brazilian gas distributor. The GSA provides for both minimum and maximum gas sales levels, as well as a ceiling and floor on pricing, derived by a formula including 6 month rolling intervals of 3 primary energy pricing proxies (Henry Hub, Brent Crude and UK-NBP Natural Gas). We will provide more specific metrics of this deal in the Operating Overview below. The GSA is significant on a variety of levels. First, as we have noted in past research, natural gas is a unique commodity because its form (as a gas at least initially) make storing and transporting it in volume much more difficult than a liquid (oil) for example. We will discuss that in more length in the Industry Overview below as well, but to clarify, the fact that Alvo Petro has signed a long term and sizable sales contract with a large gas distributor for delivery to a location in reasonable proximity to their resource and with favorable price collars is in our view "about as good as it gets".

- Natural Gas Treatment Facility Contract

On September 21, 2018, the Company announced the award of a contract for the construction of their gas treatment facility in Bahia. This facility will treat the gas from Caburé for sale to Bahiagas per the GSA noted above. As Alvo Petro notes *"This facility is the key strategic asset underpinning our natural gas development project and will be the first 100% independently owned treatment facility in Brazil capable of delivering sales specification natural gas"*. This agreement was signed with a company called Enerflex Ltd. ("Enerflex"), which is a *"global leader in the natural gas industry providing integrated gas compression and processing solutions with an established Brazilian operating presence"*. What is particularly favorable about this agreement is that it calls for Enerflex to design and build the facility, but also own and operate it. That caveat relieves Alvo Petro of the burden of procuring financing to get the facility built and operational. We suspect that has likely shortened the time frame to get the plant into operation, which they expect (and is now contracted) in Q4 2019. We will cover some of the additional metrics of the transaction in the Operating Overview below, but to be clear, we think this agreement is yet another necessary piece to the puzzle of Alvo Petro's quest to monetize Caburé, and transition to a profitable enterprise.

- Pipeline from Caburé to the Bahiagas "Citygate"

The last remaining item needed to close the loop on the monetization of Caburé is a pipeline and associated infrastructure required to deliver gas from the Caburé blocks to the Bahiagas "City Gate". That proposed pipeline is illustrated in the map above as the thick light blue line extending from Caburé due west to the City Gate. The pipeline will cover approximately 11 kilometers, is estimated to cost \$3.5 million, and will be capable (initially) of transporting

18,000 mcf per day. The Company believes it can approximately double that capacity with some added compression infrastructure and a nominal (under \$2 million) investment.

Lastly, as some of the narrative above addresses, these agreements included another element that we think is germane to the opportunity. For example, the Company indicates that the gas sale agreement is “*Bahiagás' first GSA with an independent producer in the State of Bahia*”. They also indicate that the facility being built by Enerflex will be “*the first 100% independently owned treatment facility in Brazil capable of delivering sales specification natural gas*”. Recognize, for years Brazil’s (integrated) oil and gas industry has been dominated by *Petróleo Brasileiro* (“Petrobras”). Petrobras is a semi-public Brazilian multinational energy company. The Brazilian government and other adjuncts own approximately 2/3rds of the enterprise. For reasons we will cover in the Industry Overview below, over the past two years or so Petrobras has been divesting assets in part to improve its liquidity, and that has included assets in Brazil. The reason the Alvopetro GSA is *Bahiagás' first with an independent producer*” is because their prior GSA’s were exclusively contracted with Petrobras, who by the way also owned all of the gas treatment facilities. We believe the Petrobras divestitures have set the stage for greater participation by smaller independent players in all parts of Brazil’s energy industry. In our view Alvopetro’s “ground breaking” GSA with Bahiagas speaks to that view. We think that notion also supports additional opportunities for Alvopetro and we will elaborate on that below as well.

## 2). Gomo

As the map above illustrates, Gomo is contiguous to the north of the Caburé project. As the Company’s most recent quarterly filing notes “*Alvopetro’s Gomo gas project extends across Blocks 183 and 197 and includes the 183(1) well (which was drilled in 2014 and tested in the first quarter of 2018) and the 197(1) well (which was drilled and tested in 2014). The GLJ Report assigned 2P reserves to the drainage areas around these wells with 1.1 mmboe of assigned reserves and a before tax value discounted at 10% of \$15.8 million. To further evaluate this asset, Alvopetro plans to complete a stimulation of the 183(1) well later in 2018 with an 8 kilometre transfer pipeline to be built in 2019*”.

Just to covert the energy vernacular, the Company’s presentations suggest 34 Billion cubic feet of gas, of which just under 28 are associated with Caburé, and the balance (about 6 Bcf) is attributable to Gomo. To further edify the above comment, the Company intends to do some stimulation work at Gomo with the hopes of delineating a larger resource, and in conjunction adding a transfer pipeline that will tie into the pipeline they are constructing to carry gas from Caburé. We will address some of the outlays associated with those items below, but there are two topical items to keep in mind with respect to Gomo.

First, as we reflected, there is already a defined resource at Gomo, and they should be able to connect that resource to the city gate pipeline they are constructing via the *transfer* pipeline noted above, which should involve a relatively small outlay. We have modeled the build of that transfer pipeline and the corresponding gathering of that defined resource, although we have added it in the outyears (beginning 2022). That will likely not be the way this happens. Rather, we suspect they will take the information from the coming well 183 stimulation and ascertain if the resource is perhaps bigger than the current 6 Bcf reserve. From there, we suspect they will decide when/if to actually recover it. If they choose to recover it, we submit it will likely be before our model predicts. If they choose not to, our model may prove overstated, however, a third variable might be to push that production in to the future (more like our model assumption). We thought splitting the difference was a reasonable way to provide our model with some relevant value (albeit discounted by time) for the currently defined Gomo asset.

Second, Gomo could prove to be much larger than the current resource estimate. This is a clear valuation wild card in the Alvopetro story. It is conceivable that the recoverable Gomo resource could be considerably larger than the Caburé resource. Moreover, since Alvopetro has a 100% working interest in the 183 and 197 blocks (as opposed to the 49% working interest at Caburé), a resource ½ the size of Caburé would essentially amount to the same net resource to Alvopetro. To reiterate, the only valuation we have assigned to our model for Gomo, is the net present value of future cash flows from the current identified (6 Bcf) resource, which as discussed above, we have assumed a few years out. If the stimulation of 183-1 yields positive results, it would likely provide a considerable valuation leg to Alvopetro. We have provided some metrics to that notion later in this report.

### 3). Conventional Exploration Inventory

As we noted above, the conventional exploration inventory is located north of both the Caburé and Gomo units. We think this is more likely to be an oil play, but the Company intends to spend some money in 2019 drilling Block 57 (see map above). We have provided *no valuation* for this asset. However, here again, if their drilling endeavors in 2019 prove fruitful, this would represent another valuation leg that neither we nor presumably the street are counting on. Much like Gomo we think these assets have the potential to add valuation(s) that exceed the current valuation of the entire company and perhaps by multiples.

### 4). Legacy/Current Participation Production

The Company's past and current resource revenues are related to their participation in a small handful of fields. As of June 30, 2018, their portion of that collective participation was about 33 Boe per day. Our model has assumed similar production from these sources into the future. These are a nominal portion of our overall valuation thesis.

## Industry Overview

Recognize, Trickle Research in a Microcap research shop. That is, we are not industry analysts (oil & gas or otherwise) but rather generalists. On the other hand, we have covered several E&P companies over the years, especially given our Colorado roots, so we are not neophytes to the industry.

The above said, our industry overview on an emerging E&P story would typically include some sort of analysis regarding our sense of the state and direction of the oil and gas markets. That analysis would include some regional color as well that might address relevant geological issues or perhaps infrastructure issues and that might be especially true in the case of stories more dependent on natural gas for example. In this particular case, while prevailing oil and gas prices are not unimportant here, they are certainly mitigated by the fact that the Bahiagas gas sales agreement addressed above provides a ceiling and a floor for prevailing gas sales prices. To put that into perspective, *we think* the ceiling and floor levels correspond to about \$85 and \$53 oil prices respectively (not including inflation indexes). While we are not suggesting that prevailing prices don't matter, we just think they matter less than in instances where there are no ceiling/floor thresholds. Again, that may be especially germane to gas prices, which as we noted, can often trade at very different levels in different parts of the world in large part because of the unique transport and storage issues related to gas. As an example of that, a recent Company presentation notes that under the GSA pricing mechanism, the blended price the Company would have received had it been selling gas at that time, would have been \$6.82 /mmbtu. That compares to the prevailing price of Henry Hub gas of \$2.93 /Mcf. (Recognize, 1 mmbtu is roughly equal to 1 mcf, with a few nuances around the actual quality of the gas and Alvopetro's gas tends to have a bit better btu content than "normal"). Clearly, the GSA should prove favorable relative to most prevailing natural gas prices, which on the face makes the Alvopetro analysis different than many other gas plays.

While the above is the macro pricing view of Alvopetro's situation, we think the more salient macro issue may have to do with the political turmoil that has impacted Brazil and its energy markets for the past few years. We won't spend a great deal of time on the sordid details, but some background is probably apropos. As we noted above, the Brazilian oil and gas industry has been dominated by *Petróleo Brasileiro* ("Petrobras"). Petrobras was formed in 1953 essentially as a state-owned monopoly. Over time Brazil has allowed other independent operators across the industry albeit on a limited basis and private ownership of Petrobras was ultimately allowed as they went public on the NYSE in 2001 largely in an effort to raise the capital for both offshore and international expansions. As an adjunct, we also believe Bahiagas was originally wholly owned by the State of Bahia but was eventually sold in part to other private investors as well.

In 2014 Petrobras and the Brazilian government became ensnared in improprieties that are now known as "Operation Car Wash". Some suggest it is the biggest corruption scandal in Latin America's history. According to the Guardian.com "*At first, the press described it as the biggest corruption scandal in the history of Brazil; then, as other*

*countries and foreign firms were dragged in, the world. The case would go on to discover illegal payments of more than \$5bn to company (Petrobras) executives and political parties, put billionaires in jail, drag a president into court and cause irreparable damage to the finances and reputations of some of the world's biggest companies. It would also expose a culture of systemic graft in Brazilian politics and provoke a backlash from the establishment fierce enough to bring down one government and leave another on the brink of collapse". According to Vox.com, "the scandal nearly put Brazil out of business. It helped pitch the country into a deep recession, wiped out nearly 500,000 jobs, and threw Brazil into a political crisis. And the consequences went well beyond Brazil. Politicians in several Latin America countries were found to be involved in the corruption".*

Predictably, this scandal rocked Petrobras both socially as well as financially and is the basis for the divestitures we noted above. We also believe it has cast some scrutiny on Petrobras' stranglehold on the country's energy sector perhaps encouraging (on multiple levels) a more competitive environment. From another perspective (with a similar conclusion) a recent article from Valor.com speaking to the real costs associated with Petrobras' monopolistic behavior notes; *"for the industry the cost of Petrobras' (actual) Monopoly is the loss of competitiveness. The National Confederation of Industry has just completed a fascinating study of the issue titled "Energy Inputs: Costs and Competitiveness". The business group poured over all or most of the bottlenecks making the Brazilian economy less competitive especially in the manufacturing sector. Number one is the high price of energy. The high cost and low competitiveness a fuel supply in the country are factors that affect manufacturing competitiveness. The economies best positioned for the availability and low cost of those inputs have been winning competitive advantages and production. The cost of those energy inputs is decisive especially for energy-intensive semi-finished manufactured products, paper and pulp, chemicals, pelletizing steel making, ceramics and non-ferrous metals. The authors believe the current configuration of the natural gas industry block supply competition and allows high margins at every stage of the production chain. The average prices of fuel oil in Brazil the study says are significantly higher than the rates charged in North America, the United Kingdom and even Asian countries that do not produce the input. The government liberalized fuel prices early in the century but did not encourage competition. Today a single company, Petrobras, responds for practically all supply of oil products and natural gas in addition to holding an important role in the distribution and resale activities of those energy products.*

We think this passage speaks volumes to (again) Alvopetro's groundbreaking agreements, as well as its opportunities going forward. To put that into more specific context, we would submit that when we initially heard this story, we wondered why Bahiagas would sign a GSA with upstart Alvopetro for price collars well beyond what natural gas was trading at in major markets around the world, especially for gas that was essentially being produced locally. The answer to that (in conjunction with the narrative above) was/is that the GSA pricing while favorable relative to other world markets, was cheaper than what Bahiagas was paying for gas from Petrobras. Suddenly, the GSA makes sense. In short, we think the changing energy environment in Brazil may create marked openings for independent players along the energy supply chain, especially those like Alvopetro who have already established a foothold in-country. Keep in mind, despite its challenges (in part because of Operation Car Wash) with a population of 207 million, Brazil is the world's 8<sup>th</sup> largest economy and 10<sup>th</sup> largest oil producer. Frankly, we tend to believe that the street may be discounting Alvopetro's opportunities because of Brazil's past struggles, whereas the reality of the Country's changing/emerging oil sector might be more indicative of a *premium* for established independent participants.

## **Operating Overview**

The Company currently generates production and revenues from a small handful of participation projects. We expect that participation to continue to produce similar (relatively nominal) revenue contributions to the past several quarters.

As we alluded to above, we expect the Company's next revenue leg to commence with the start of the delivery of Caburé in Q4 2019. That event will require some capex and additional model nuances that we will try to delineate here, and we will try to do that in parallel with the pieces they have recently added.

First, the city gate processing facility agreement with Enerflex entails some noteworthy components. We believe the project amounts to around \$11 million worth of capex. As we noted, the fact that Enerflex will be spending that capex

instead of Alvopetro is a positive attribute of the deal in the sense that Alvopetro does not need to secure debt financing or sell additional equity to advance the infrastructure. The arrangement also includes provisions for Enerflex to operate the facility, so this deal is truly a “turnkey” arrangement. As a result, it includes Enerflex guarantees regarding completion dates and eliminates the typical concerns regarding cost overruns as well. As an aside, we think this is a favorable outcome for Alvopetro, as we suspect it relates directly to the management aptitudes we allude to throughout this report. In terms of the numbers, this is a 10-year deal, and the anticipated total **annual cash outlay** to service the arrangement will be \$2.9 million. A portion of that outlay will be in the form of an annual operating expense and another portion will be capitalized (essentially a lease). At the end of the 10-year period, Alvopetro will have the option to purchase the facility for a (relatively) nominal amount which we believe will be under \$500,000. For our modeling purposes, we have assumed Alvopetro’s purchase of the plant, and ongoing operating expenses that we think will be reasonable at that point in time. We submit, there are various outcomes that could occur after that point. To summarize the Enerflex arrangement, if we understand all of the components correctly (if the values we assign to the pieces of the deal are accurate) we think the transaction is commensurate with something around 7% project financing if Alvopetro had borrowed money and built the facility themselves, which would have included delay and cost overrun risks as well. To reiterate, we think they struck a very favorable deal all things considered.

The Company recently raised approximately \$4 million to complete the pipeline from Caburé to the city gate. The transaction involved a unit consisting of 4 common shares and 1 warrant. The common shares were effectively priced at USD\$.35 each and the warrant has a USD \$.50 strike price and expires in December 2019. Obviously, completing that financing was critical to closing the loop on the infrastructure needed to deliver Alvopetro’s production to the city gate. We have worked that dilution/cash into our model.

Looking ahead, the Company has several additional capex related outlays it plans to make in the coming 12 months or so. The biggest of these is a \$7 million development payment to their neighbor/unitization partner at Caburé. That payment will need to be made prior to Alvopetro taking delivery of their share of the gas in late 2019/early 2020. They have also planned outlays for the stimulation of 187 at Gomo, and that may include the tie-in pipeline we discussed above. We estimate that to be in the \$2 million to \$2.2 million range. Further, as we also noted, they intend to do some work on Block 57, which we believe will require between \$1 million and \$1.5 million. As a result of these outlays, we anticipate that the Company will need to access the capital markets at some point through 2019 and we believe they will collectively require between USD \$11 million and USD \$14 million. We have modeled a debt piece in that regard bearing interest and repayments commensurate with what we view as likely prevailing parameters, but we submit, that could include an equity piece instead, or perhaps even some sort of hybrid of the two. Just to edify, much of this financing is critical to their ability to monetize their Caburé gas, so we view this as a paramount need/cogent risk to the stock.

To reiterate, the Company expects all the necessary infrastructure required to deliver Caburé gas to the Bahiagas city gate to be completed prior to yearend 2019. Depending on the exact timing, that means they could conceptually begin recognizing revenues in Q4 2019. We have modeled a small contribution from Caburé in Q4-2019, so recognize that we could be ahead of ourselves in that regard. We submit, we tend to see things half full rather than half empty more times than not.

We covered the GSA collar (ceiling and floor) pricing above. Given that potential commodity pricing variance, which is of course typical with any energy production story, our methodology to projecting pricing is this. We attempted to back test the basket of proxies upon which the derived GSA pricing is based and matched that against prevailing information the Company provided regarding what that pricing would have been given different periods of time. We then tried to extrapolate that number as a percentage of Brent Crude pricing since that is the proxy which the basket calculation applies the highest weighting to. Clearly, that approach is susceptible to some error, but we think it is reasonable. We then applied a straight projection of \$65 Brent Crude prices (roughly a 10% discount to recent Brent pricing) into perpetuity, although we also escalated the floor and ceiling prices by an assumed 2% per year per the GSA, which calls for an inflation adjustment to the collar. Obviously, that assumption could lead to substantially higher GSA pricing in outyears, even at the discounted Brent assumption of \$65. Just to edify, we estimate that with inflation adjustments, by 2022, the floor pricing will equate to something close to USD \$56, which means that the Company would be “protected” from oil prices lower than that threshold (provided our GSA pricing calculation methodology is in the ballpark). We would add, the Caburé resource also contains some high value condensate which is not part of this GSA math we have derived; however, we believe they will produce around 115 barrels of condensate per day as well,

which is not insignificant. That may be helpful for those attempting to synthesize our numbers. Clearly, the ultimate pricing of the gas they sell is highly topical to our model and more importantly their financial results.

A second major component to the GSA (beyond pricing) is the amount of gas they will sell into the city gate each day/quarter/year. The agreement calls for a minimum of 5.9 mmcf per day, but the projected pipeline will have an initial capacity of about 18 mmcf per day and Alvopectros' share of projected daily Caburé gas is 16 mmcf/day (at plateau rates). As a point of reference and as we understand it, the state of Bahia's current daily demand for gas is 140 mmcf /day. With all of that in mind, the question becomes, how much gas is Bahiagas likely to purchase each day from Alvopectro, beyond the contractual minimum of 5.9 mmcf? As another reference, we believe the Company has based much of its own assumptions around 12 mmcf/day. To reiterate, we think they could provide up to 16 mmcf per day based on their share of projected Caburé plateau production, which is within the capacity of the new pipeline. In addition, their unitization partner is selling gas into a power plant that will have varying demands for power. That is, there may be times when Alvopectro can draw a larger portion of the Caburé production if their partner is requiring a lesser portion of their respective "share". So, conceivably there might be times when Alvopectro might deliver the full capacity of the pipeline (18 mmcf/day) if Bahiagas presents the demand and their unitization partner is experiencing lower demand. We would add, as we understand it, the GSA provides that each year Alvopectro can increase the "firm delivery" amount of the contract, which essentially dictates the minimum that needs to be delivered/accepted. As we alluded to above, we feel confident that the basis for the GSA in the first place is that it provides Bahiagas with lower and more consistent pricing than they are getting from Petrobras. From that perspective, we tend to think that Alvopectro may well be able to sell Bahiagas as much natural gas into the city gate as they can produce.

To further the point, we know that the State of Bahia's overall daily demand is several times larger than Alvopectro can deliver through the city gate in any case. With that in mind, we would refer back to some of the comments above regarding the perceived inefficiencies that Brazil's energy sector has demonstrated presumably as a result of Petrobras' pricing power. With that in mind, while we have no way to know what Bahiagas is paying for Petrobras gas today, we are assuming that it is higher than the amounts they anticipate paying to Alvopectro through the GSA. Maybe there is something here we are missing or don't understand, but if that is indeed the case, we would think Bahiagas might be inclined to purchase as much gas from Alvopectro as they possibly can. Certainly, that notion could be fluid if Petrobras begins to respond to greater competition, but in general, we tend to think Bahiagas' demand is likely to be closer to the higher end of what Alvopectro can provide, than to the minimum 5.9 mmcf/day stipulated in the GSA. Given the multiple variables here; supply, demand, production variables, competition etc. we are using 10 mmcf/day for our model and corresponding valuation. We submit, that could prove aggressive since it is well beyond the 5.9 mmcf/day minimum, however, again, we tend to think this number is more likely to settle closer to the Caburé production threshold of 16 mmcf/day than to the minimums. Our 10 mmcf/day assumptions lie in the middle of the two, so we view that as a reasonable approach.

As a final note to our revenue assumptions, as we mentioned above, we think there is reason to believe that Petrobras may be losing some of its grip on the Brazilian energy markets. If that assertion is correct, the result may be more activity amongst independents in the country. Specifically, Alvopectro's presentations note that exploration results suggest that fields in and around Caburé and Gomo may contain 300 mmcf of gas reserves. Given that the Company could have excess capacity, we think it is conceivable that they could provide midstream transport and processing services to other producers that might emerge in the area. We have built some assumptions into the model that assume the utilization of that capacity via third party services. We have modeled most of that capacity "sale" out into years beyond the expiration of the Enerflex lease. That may be an aggressive approach from some perspectives, however, here again, we took this approach to providing value to the midstream assets, because we believe they do in fact represent value, and we think that may be true even if at some point Alvopectro exhausts its own upstream production.

The Company's expenses are relatively straightforward. We believe we have built in appropriate production margins as well as reflective increases in SG&A against higher revenue. Our discussions with management suggest to us that they believe that much of the appropriate levels of SG&A are already embedded because they have been carrying a larger staff than they might otherwise in anticipation of the coming transition to positive cash flow. Our sense is that we may be overstating SG&A through some of the revenue expansion. We will adjust that when/if they prove us wrong. Obviously, beyond the Enerflex accounting (and in part in conjunction with it) depreciation and depletion will see the biggest jumps in relative expense recognition. Obviously, those line items do not mitigate cash or in turn the DCF analysis and conclusions.

## **Management**

### **Corey C. Ruttan**

*Corey C. Ruttan is the President and Chief Executive Officer and a Director of Alvopetro. Previously, Mr. Ruttan was the President and Chief Executive Officer of Petrominerales Ltd. from May 2010 until Petrominerales was acquired by Pacific Rubiales Energy Corp. in November 2013. Prior thereto, he was the Vice President Finance and Chief Financial Officer of Petrominerales since May 2006. From March 2000 to May 2010, Mr. Ruttan was the Senior Vice President and Chief Financial Officer of Petrobank Energy and Resources Ltd. and held increasingly senior positions with Petrobank since Petrobank's inception in 2000. He also served as Executive Vice President and Chief Financial Officer of Lightstream Resources Ltd. from October 2009 to May 2010. Mr. Ruttan previously served as Vice President of Caribou Capital Corp. from June 1999 to March 2000; Manager Financial Reporting of Pacalta Resources Ltd. from May 1997 to June 1999; and began his career at KPMG from September 1994 to May 1997. Mr. Ruttan obtained his Bachelor of Commerce degree majoring in Accounting from the University of Calgary in 1994 and obtained his Chartered Accountant designation in 1997.*

### **Alison Howard**

*Alison Howard is the Chief Financial Officer of Alvopetro. Ms. Howard is a Chartered Accountant with over 10 years of experience in Canadian and international taxation, accounting and finance. Ms. Howard joined Petrominerales in July 2011 as Tax Manager and was promoted to Tax Director in March 2013. From May 2008 to July 2011, Ms. Howard was the Tax Manager at Petrobank Energy and Resources Ltd. Prior thereto, Ms. Howard spent a number of years at Deloitte LLP in Calgary. Ms. Howard obtained her Bachelor of Commerce degree from the University of Saskatchewan in 1999.*

### **Andrea Hatzinikolas**

*Andrea Hatzinikolas is the Vice President, Corporate and Legal of Alvopetro. Ms. Hatzinikolas joined Petrominerales in 2011 and held increasingly senior positions including Vice President Business Development, General Counsel and Corporate Secretary. Prior to joining Petrominerales, Ms. Hatzinikolas was the General Counsel of Petrobank Energy and Resources Ltd. since January 2007, as well as holding the position of General Counsel and Corporate Secretary of Lightstream Resources Ltd. and Petrominerales Ltd. Prior to joining Petrobank, Ms. Hatzinikolas was an associate in the Calgary office of a national law firm, with a practice focusing on securities and corporate law. Ms. Hatzinikolas received her Bachelor of Commerce degree in 1999 and Bachelor of Laws degree in 2003.*

### **Nanna Eliuk**

*Nanna Eliuk is the Senior Geophysicist of Alvopetro. Ms. Eliuk is a Professional Geophysicist (M.Sc.) with over 18 years of diversified petroleum exploration and development experience. She has expertise in conventional and unconventional plays, in both carbonate and clastic reservoirs in different depositional and structural settings (including pre-salt) in various basins around the world. Prior to joining Alvopetro, Ms. Eliuk was the Senior Explorationist of Condor Petroleum (Kazakhstan) for two years, and prior thereto was the Vice President of Geophysics and Land for Waldron Energy. Ms. Eliuk started her career in 1997, holding progressively senior roles at Husky Energy for five years, followed by Compton Petroleum for over 6 years. Her extensive experience includes geophysical evaluation and analysis for business development opportunities and new ventures in various international basins, along with regional mapping, play fairway analysis, petroleum system evaluation, prospect definition and seismic attribute analysis. Ms. Eliuk holds a masters degree in Geology and Geophysics along with a BSc. in Geology.*

### ***Carlos Eduardo Arantes Freitas***

*Carlos Eduardo Arantes Freitas joined Alvopetro in 2008. Previously, he was responsible for managing and investing over US\$150 million in oil and gas exploration and development activities in Brazil for various Brazilian-based companies. Since September 2011, he has been the Vice-President and Director of the Brazilian Association for Independent Producers of Oil and Gas. Mr. Arantes Freitas has over 20 years of experience managing concession projects in the public and private sectors of Brazil. Mr. Arantes Freitas holds an MBA from the University of Dallas, a Bachelor of Science degree in Civil Engineering from the Federal University of Minas Gerais and a Bachelor degree in Economics from Pontificia Universidade Catolica de Minas Gerais.*

### ***John D. Wright***

*Mr. Wright is the Chairman of the Board of Directors of Alvopetro. Mr. Wright was the President and Chief Executive Officer of Petrominerales from inception to May 6, 2010 and then the Chairman of the Board of Directors. Mr. Wright has been the President, Chief Executive Officer and a Director of Petrobank Energy and Resources Ltd. now Touchstone Exploration Ltd., a company operating in Trinidad and Tobago and Canada since 2000, and was appointed the Chairman of the Board in January 2013. Mr. Wright has been the President and Chief Executive Officer and a Director of Lightstream Resources Ltd. since 2011, and served as Chairman of the Board and Chief Executive Officer between October 2009 and May 2011. Previously, Mr. Wright served as the President and Chief Executive Officer of Pacalta Resources Ltd. from May 1996 to June 1999; Executive Vice President and Chief Operating Officer of Morgan Hydrocarbons Inc. from December 1993 to April 1996; and Vice President Production of Morgan Hydrocarbons Inc. from 1989 to 1993. Mr. Wright began his career in the oil industry after he graduated from the University of Alberta in 1981 with a Bachelor of Science degree in Petroleum Engineering. Mr. Wright is a Professional Engineer and also a Chartered Financial Analyst charterholder.*

For information regarding Alvopetro's additional board members, visit: <https://alvopetro.com/Board-of-Directors>

## **Risks and Caveats**

Alvopetro is a small emerging energy exploration and production company. While it has managed to generate a small amount of revenue in the past largely from participation in a handful of non-operated projects, it has yet to produce resources at levels enough to organically fund the Company. While we believe the current strategy they have set in motion should carry them to positive cash flow and profitability, there are most certainly scenarios that could inhibit that progress. As an example, as we noted above, first and foremost, in 2019 they need to raise the necessary capital to fund their share of development and completion at Caburé. Failure to do that could be a significant setback to Alvopetro and would almost certainly compromise our model and target assumptions. Other negative scenarios might include interruptions in Caburé production, less Caburé production than is forecast, delays or problems with the construction of the Caburé pipeline, delays or problems with the Enerflex processing facility and a host of others. Moreover, setbacks of that nature, among other things, would likely lead to additional dilution of the Company.

We have argued that we think the street may be discounting the Company because of perceived risks in Brazil. We made a counter argument that we believe the environment in Brazil may actually be starting to favor independent producers. We could be wrong about that assessment, and we could be wrong for any one of multiple reasons. While we think Petrobras is on a path of divestiture in Brazil, and we think there may be constituencies inside of Brazil that would like to see Petrobras' influence over the domestic markets reduced, we may be overstating that. Further, Petrobras may have something to say about that as well. Most notably, while a weaker Petrobras may mean greater opportunity for independents like Alvopetro, it will also likely mean more competitive pricing for the same. While we discussed the favorability of the GSA floor pricing, Alvopetro's success beyond Caburé may not include the benefits of that GSA. Further, a more competitive environment in general may discourage the capital required to support notions we raise above like selling excess midstream capacity to other potential upstream producers that might otherwise

emerge. That is a long way of saying that while we see greater competition as a positive opening for independents like Alvopetro, it may also come with some additional challenges.

Along the same lines as the above, we are confident suggesting that Brazil's scandal and the exposure of government corruption is not a good backdrop for attracting the foreign capital that is often a prerequisite for growth in emerging countries like Brazil. The country may have to wear that "scarlet letter" for some time before investors regain their confidence in the visibility of associated sovereign risks. We don't think that will be good for anyone doing business in Brazil, especially if that business is dependent on the clip of the Country's economic engine. That would include energy, and by extension Alvopetro. By the way, that risk applies to the broader worldwide picture as well. Slower worldwide economic activity will likely lead to lower oil prices and perhaps lower demand across the globe including Brazil.

In our view, Alvopetro has accomplished a great deal with a small handful of talented people. We suspect that the loss of certain or perhaps any of the core management team would likely be considerably negative for the Company.

Alvopetro's shares are generally illiquid and thinly traded. We don't expect that situation to change any time soon. As a result, investors should consider that caveat in the context of their own investment horizons and risk profiles.

These are just a few of the more salient risks we see in Alvopetro shares. There are most certainly others we have overlooked or are unable to identify at this time.

### **Valuation Overview**

We don't generally provide a separate valuation section to our research, but in this instance, because there are some wide variances in potential outcomes given different combinations of inputs, we thought it might make sense to provide a matrix of sorts that would demonstrate both the impact of individual inputs, as well as perhaps support our notion that Alvopetro may be undervalued even in the context of lesser assumptions regarding those inputs.

The two primary inputs we are concerned with here are the amount of gas the Company can sell through the city gate over time, and the price(s) they receive for that gas. In addition, we have included matrices that carry assumptions about success at Gomo as well as the ability of the Company to sell excess capacity over time through the midstream infrastructure they are building today. Again, we have provided this exercise to demonstrate the impact of these differing variables, at least as we understand and have modeled them, and to then apply those conclusions to the current valuation and by extension the forward opportunity we see for the underlying shares.

We submit our models are subject to our assumptions so like all other models, they may not prove accurate on the face.

As a point of reference, and in conjunction with something we touched on above, while the price Bahiagas will be paying for Alvopetro's production will be derived by a 6-month trailing, rolling average of three separate energy markets, we have attempted to project that price as a percentage of Brent Crude, which is the largest component of the three-proxy basket. Thus, in the matrices below, the "Gas Price/Mcf" roughly equates to an assumed Brent Crude price of 10X that number. So then, if the matrix assumes an ongoing gas price of \$7.50, that would suggest ongoing prevailing Brent Crude prices of \$75/barrel. Just to be clear, in most instances the Company "boe" numbers will be considerably lower than prevailing Brent Crude because of the weightings of the other two markets which are both (lower boe) natural gas markets. Obviously, these prices will probably move up and down as time goes on, but we think this provides a good reference in terms of how people might view Alvopetro in the context of future oil prices.

**Matrix #1** below reflects our per share estimates of the appropriate 12-24 month price targets given varying city gate gas prices (the vertical axis) and varying daily production sales into the city gate (the x-axis). This matrix assumes that Alvopetro will not utilize the midstream asset (sell excess capacity), but rather, it reflects the value of the Company as we see it if they simply sell the gas from Caburé and the limited amount they have identified from Gomo. This matrix essentially provides no ongoing value for the midstream beyond its ability to deliver Alvopetro's own production and

it provides no value for the “conventional exploration inventory” such as Block 57. This could be viewed as the sort of “worst case” matrix of the three. We highlighted one of the boxes below to illustrate that in our opinion, the current valuation of the stock is lower than what we see as the “worst case scenario, **in the context of pricing and production variables**. Notice this assumption utilizes the floor pricing which is well below current levels:

Matrix #1						
Gas Prices/Mcf						
↓	\$8.45 (ceiling)	\$ 0.80	\$ 1.01	\$ 1.12	\$ 1.21	\$ 1.34
	\$7.5	\$ 0.67	\$ 0.86	\$ 0.95	\$ 1.03	\$ 1.15
	\$6.5	\$ 0.53	\$ 0.69	\$ 0.77	\$ 0.84	\$ 0.94
	\$5.25 (floor)	\$ 0.41	\$ 0.55	\$ 0.62	\$ 0.67	\$ 0.75
Daily Mmcf sales →		5.9	8.0	10.0	12.0	16.0

**Matrix #2** assumes that Alvopectro will sell its excess midstream (pipeline and processing) capacity to other producers, which would be equivalent to the maximum capacity less the gas from Caburé and the limited amount they have identified from Gomo. This matrix essentially provides some value for the midstream beyond its ability to deliver Alvopectro produced gas but it provides no value for the “conventional exploration inventory” such as Block 57. We would add, this matrix only assumes “full capacity” of 18Mmcf /day, whereas as we noted, we believe that capacity can be doubled with nominal additional inputs. This could be viewed as the “middle case” matrix of the three although we still view this as conservative in the sense that it does not reflect full capacity at levels that it could easily be increased to achieve. We would note, the highlighted box in this matrix is our current valuation/price target.

Matrix #2						
Gas Prices/Mcf						
↓	\$8.45 (ceiling)	\$ 1.19	\$ 1.36	\$ 1.45	\$ 1.52	\$ 1.63
	\$7.5	\$ 1.06	\$ 1.21	\$ 1.28	\$ 1.34	\$ 1.43
	\$6.5	\$ 0.92	\$ 1.04	\$ 1.10	\$ 1.15	\$ 1.23
	\$5.25 (floor)	\$ 0.81	\$ 0.90	\$ 0.95	\$ 0.98	\$ 1.03
Daily Mmcf sales →		5.9	8.0	10.0	12.0	16.0

**Matrix #3** assumes that Alvopectro will sell its excess midstream (pipeline and processing) capacity to other producers, which would be equivalent to the maximum capacity less the gas from Caburé and Gomo. Beyond the Matrix #2 assumptions about Gomo, this matrix also assumes additional discoveries at Gomo that ultimately equate to equal production assumed at Caburé. This could be viewed as the “best case” matrix of the three although again, it provides no value for the potential of the conventional exploration inventory. We highlighted a box below that illustrates what we think is our equivalent valuation to our target price delineated above in Matrix #2 if we assume further development and resource success At Gomo resulting in equivalent production to Caburé and corresponding expansion of midstream capacity to carry and process that additional production. We think these assessments demonstrate the open-ended posture of the Alvopectro story.

Matrix #3						
Gas Prices/Mcf						
↓	\$8.45 (ceiling)	\$ 2.12	\$ 2.38	\$ 2.53	\$ 2.65	\$ 2.84
	\$7.5	\$ 1.95	\$ 2.17	\$ 2.29	\$ 2.40	\$ 2.57
	\$6.5	\$ 1.77	\$ 1.95	\$ 2.05	\$ 2.14	\$ 2.28
	\$5.25 (floor)	\$ 1.64	\$ 1.79	\$ 1.86	\$ 1.92	\$ 2.02
Daily Mmcf sales →		11.8	16	20	24	32

## Summary and Conclusion

Alvopetro has spent the better part of the past five years attempting to establish a beachhead in the Brazilian energy industry. We think that started with oil aspirations, but it has ended up involving a considerable natural gas resource as well as some additional upstream assets that have the potential to be significant valuation contributors as well. On the other hand, their path to monetizing their natural gas assets has not been without significant challenges, which have included unitization agreements, gas sales agreements, new pipelines and new processing facilities. Each of these has also included its own set of financing, permitting and other associated hurdles. In our view, their ability to close the loop on this entire process, the visibility of which is quite recent, is a clear testament to management's aptitudes, hard work and dogged persistence. We are not sure the street has grasped the magnitude of their accomplishments in that regard. We believe the integrated approach that Alvopetro has developed has provided a turnkey platform that may not work had they not been able to assemble each of the upstream, midstream and downstream pieces. The fact is, they *have* been able to and we think the visibility through 2018 has improved substantially. Further, there is little question in our minds that the whole is clearly more valuable than the sum of the parts.

We expect 2019 to be a transitional year into production for the Company, which could include some additional valuation catalysts in terms of resource development in both Gomo and the conventional exploration inventory. We think demonstrated success in the field at either or both locations will provide a valuation catalyst for the shares.

From the macro view, we believe the integrated energy landscape of Brazil is changing, which includes a declining influence from state-controlled Petrobras in favor of increased competition from other participants. We believe that will create a net positive opportunity for entrenched independent players like Alvopetro. As we noted above, we think this is one of the less visible but perhaps highly positive attributes of the Alvopetro opportunity. That is a telling comment largely because we believe Brazil's political scandal, of which Petrobras was the protagonist, has created a cloud of discount amongst Brazil investments.

Lastly, there are still things that need to come together here for Alvopetro to commence Caburé gas sales in late 2019/early 2020. Further, energy prices as always remain a wild card, as does overall global economic activity and each of those could impact the success of Alvopetro's opportunities. However, as we said, we don't think the visibility and corresponding path to positive cash flow and earnings has ever been clearer for Alvopetro and we think that path points to much better valuations for Alvopetro's share price. We would add, our valuation/price target assumptions include some discount rates that are certainly beyond the cost of capital metrics we have seen tied to at least portions of the company's endeavors. We think that is an appropriate approach as it addresses some still inherent risks in the story. We may revisit those discounts and resulting valuations as we move forward. As a result of our analysis, we are initiating coverage of Alvopetro Energy Ltd. with an allocation of 4 and a 12-24 month price target of \$1.10 per share. We will assess each of these conclusions as additional information becomes available.

## Projected Operating Model

<b>Alvopetro Energy Ltd.</b>							
<b>Projected Operating Model (in USD)</b>							
<b>By Trickle Research LLC</b>							
	Actual	Actual	Estimate	Estimate	Estimate	Estimate	Estimate
	<u>3/31/18</u>	<u>6/30/18</u>	<u>9/30/18</u>	<u>12/31/18</u>	<u>Fiscal 2018</u>	<u>Fiscal 2019</u>	<u>Fiscal 2020</u>
Oil Sales	\$ 116	\$ 216	\$ 217	\$ 187	\$ 735	\$ 1,380	\$ 27,006
Royalties and Production Taxes	\$ (13)	\$ (19)	\$ (20)	\$ (17)	\$ (68)	\$ (124)	\$ (2,971)
					\$ -	\$ -	\$ -
Oil Revenue	\$ 103	\$ 197	\$ 197	\$ 170	\$ 667	\$ 1,256	\$ 24,036
Midstream Transportation Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,392
Other Income	\$ 29	\$ 37	\$ -	\$ -	\$ 66	\$ -	\$ -
Total Revenue and Other Income	\$ 132	\$ 234	\$ 197	\$ 170	\$ 733	\$ 1,256	\$ 28,428
					\$ -	\$ -	\$ -
Production	\$ 236	\$ 179	\$ 176	\$ 174	\$ 765	\$ 729	\$ 2,010
Transportation	\$ 4	\$ 5	\$ 3	\$ 3	\$ 16	\$ 15	\$ 66
General & Administrative	\$ 714	\$ 758	\$ 757	\$ 756	\$ 2,984	\$ 3,041	\$ 3,810
Depletion and Depreciation	\$ 33	\$ 54	\$ 93	\$ 91	\$ 271	\$ 532	\$ 5,780
Impairment	\$ 12	\$ 196	\$ -	\$ -	\$ 208	\$ -	\$ -
Exploration and Evaluation	\$ -	\$ 141	\$ 160	\$ 191	\$ 492	\$ 3,287	\$ 209
Accretion of Decommissioning Liabilities	\$ 10	\$ 10	\$ 10	\$ 10	\$ 40	\$ 40	\$ 40
Share Based Compensation	\$ 3	\$ 24	\$ 20	\$ 20	\$ 67	\$ 80	\$ 80
Foreign Exchange Loss	\$ 9	\$ (5)	\$ -	\$ -	\$ 4	\$ -	\$ -
Loss on Disposition of Assets	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
UPGN Operating Fees & Lease	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 725	\$ 2,900
Total Operating Expenses	\$ 1,021	\$ 1,362	\$ 1,219	\$ 1,245	\$ 4,847	\$ 8,449	\$ 14,896
Interest Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,176	\$ 1,260
Other Non-Operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total non-operating Expenses	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,176	\$ 1,260
Gain (Loss) Before Taxes	\$ (889)	\$ (1,128)	\$ (1,021)	\$ (1,075)	\$ (4,114)	\$ (8,370)	\$ 12,272
Income Tax Charge (Recovery)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Net Loss	\$ (889)	\$ (1,128)	\$ (1,021)	\$ (1,075)	\$ (4,114)	\$ (8,370)	\$ 12,272
Exchange (loss) gain on translation of foreign operations	\$ (190)	\$ (4,821)	\$ -	\$ -	\$ (5,011)	\$ -	\$ -
Comprehensive (loss) gain	\$ (1,079)	\$ (5,949)	\$ (1,021)	\$ (1,075)	\$ (9,125)	\$ (8,370)	\$ 12,272
Net Gain (Loss) per share							
Basic	\$ (0.01)	\$ (0.01)	\$ (0.01)	\$ (0.01)	\$ (0.10)	\$ (0.09)	\$ 0.12
Diluted	\$ (0.01)	\$ (0.01)	\$ (0.01)	\$ (0.01)	\$ (0.10)	\$ (0.09)	\$ 0.12
Shares O/S - Basic	85,166,871	85,166,871	85,166,871	96,684,871	88,046,371	97,491,468	99,745,044
Shares O/S - Diluted	85,166,871	85,166,871	85,166,871	96,684,871	88,046,371	98,263,731	99,745,044

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## **Rating System Overview:**

There are no letters in the rating system (Buy, Sell Hold), only numbers. The numbers range from 1 to 10, with 1 representing 1 "investment unit" (for my performance purposes, 1 "investment unit" equals \$250) and 10 representing 10 investment units or \$2,500. Obviously, a rating of 10 would suggest that I favor the stock (at respective/current levels) more than a stock with a rating of 1. As a guideline, here is a suggestion on how to use the allocation system.

Our belief at Trickle is that the best way to participate in the micro-cap/small cap space is by employing a diversified strategy. In simple terms, that means you are generally best off owning a number of issues rather than just two or three. To that point, our goal is to have at least 20 companies under coverage at any point in time, so let's use that as a guideline. Hypothetically, if you think you would like to commit \$25,000 to buying micro-cap stocks, that would assume an investment of \$1000 per stock (using the diversification approach we just mentioned, and the 20-stock coverage list we suggested and leaving some room to add to positions around allocation upgrades. We generally start initial coverage stocks with an allocation of 4. Thus, at \$1000 invested per stock and a typical starting allocation of 4, your "investment unit" would be the same \$250 we used in the example above. Thus, if we initiate a stock at a 4, you might consider putting \$1000 into the position ( $\$250 * 4$ ). If we later raise the allocation to 6, you might consider adding two additional units or \$500 to the position. If we then reduce the allocation from 6 to 4 you might consider selling whatever number of shares you purchased with 2 of the original 4 investment units. Again, this is just a suggestion as to how you might be able to use the allocation system to manage your portfolio.

**For those attached to more traditional rating systems (Buy, Sell, Hold) we would submit the following guidelines.**

**A Trickle rating of 1 thru 3 would best correspond to a "Speculative Buy" although we would caution that a rating in that range should not assume that the stock is necessarily riskier than a stock with a higher rating. It may carry a lower rating because the stock is trading closer to a price target we are unwilling to raise at that point. This by the way applies to all of our ratings.**

**A Trickle rating of 4 thru 6 might best (although not perfectly) correspond to a standard "Buy" rating.**

**A Trickle rating of 7 thru 10 would best correspond to a "Strong Buy" however, ratings at the higher end of that range would indicate something that we deem as quite extraordinary..... an "Extreme Buy" if you will. You will not see a lot of these.**